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ABSTRACT

The present invention relates to a method for positioning a mobile station and a repeater thereof. Said method comprises:

5 the mobile communication network, when receiving a positioning request from a mobile station, instructing repeaters to send auxiliary positioning signals, and the mobile station performs measurement according to the received auxiliary positioning signals sent from the repeaters and downlink signals sent from

10 the base station, and then estimating the position of the mobile station according to the measurement results, and thereby implementing the positioning of the mobile station. Said repeater is implemented through adding an auxiliary positioning unit in the downlink processing channel of a

15 traditional repeater; said auxiliary positioning unit comprises a communication module, a frame timing recovery module, a timing control module, and a pilot modulating module. The present invention achieves the object of improving the accuracy of positioning the mobile station within the coverage

20 area of repeaters; in addition, the repeater with auxiliary positioning function according to the present invention is simple to be implemented and doesn't affect the structure and signaling flow of the traditional mobile station.